

Abstract:

Page 29, the abstract, replace with the following new abstract paragraph:

--- DUAL-MODE [[UWB]] ULTRA WIDEBAND AND [[WLAN]]
TRANSCEIVER WIRELESS LOCAL AREA NETWORK
COMMUNICATIONS

Abstract of the Disclosure

A dual-mode ultra wideband (UWB) and wireless local area network (WLAN) communication transceiver is used to implement two disparate systems of UWB and WLAN ~~operation~~ communications within a single device ~~according to present invention~~. During the UWB mode, the ~~dual-mode~~ communication transceiver sends and receives the UWB signal ~~using transmitter and receiver filters as well as deals with baseband functions of multichannel PN-sequence mapping and demapping, rake receiver, equalizer and channel estimation with programmability at very-~~ high data rate with a relative short transmission range. During the WLAN mode, the ~~dual-mode~~ communication transceiver sends and receives the WLAN signal ~~using transmitter and receiver filters as well as processes baseband functions of IFFT and FFT, I/Q modulation and demodulation, and channel estimation with programmability~~. In addition, ~~the multichannel-based multicarrier for the UWB and WLAN transceiver can be controlled to provide information for transmitting or no-transmitting certain UWB channel signals to avoid the interference between UWB and WLAN device~~. at a relative low data rate, but with a longer transmission range. Thereby, trade-off benefits of the dual-mode UWB and WLAN communication transceiver can be mutually utilized to achieve seamless wireless broadband communications between two different standards.